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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,460	02/08/2001	Marcus J.H. Willems van Dijk	P 277120 P-172.010-US	3244

909 7590 05/11/2006

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EXAMINER

BALI, VIKKRAM

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/777,460

Applicant(s)

WILLEMS VAN DIJK ET AL.

Examiner

Vikram Bali

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-11 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-11 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/16/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/3/2006 has been entered. And, all the amendment to the claims has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11, 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the table" in lines 3, 6, 7, and 10. There is insufficient antecedent basis for this limitation in the claim.

Claims 16-20 are dependent on claim 11 and therefore are also rejected.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2624

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-7, 9-11, 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over van den Brink (US 4778275), (herein after 275) in view of JP 6-302495, Shigeo (herein after Shigeo).

With respect to claim 1, 275 discloses object place on first position, measuring a displacement, translating the object and the table relative to one another and placing the object at the required position, (see col. 7, lines 24-40, the mask "object" is at the first position and the system AS1 aligns the mask by positioning the mask at the required position, see col. 7 line 64 through col. 8 line 5), as claimed. However, 275 fails to explicitly disclose, the displacement is measured with respect to the first object table, and removing the object from the first object table in order to placing it back on to

Art Unit: 2624

the first object table, as claimed. Shigeo teaches the displacement is measured with respect to the first object table, (see the constitution the rotation angles and the figure 8c) and removing the object from the first object table in order to placing it back on to the table, (see the constitution the reticle 12 is taken out "remove" and the stage is turned and place it back at the required position) as claimed. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references, as they are analogous because they are solving the similar problem of lithography. The object removing system of the Shigeo can be place in to the 275, in order to accurately align the reticle at a high speed.

With respect to claim 2, 275 further discloses, aligning a first mark on he object to a second, (see col. 7, lines 25-35) as claimed.

With respect to claim 3, 275 further discloses, second mark is located on the second object table, (see col. 7, lines 37-40, the mark P1 is located on the substrate) as claimed.

With respect to claim 4, 275 further discloses, mask is held by first object table, (see figure 3, mask MA is held by the first object table) as claimed.

With respect to claim 5, 275 further discloses, second mark is located on substrate, (see col. 7, lines 37-40, the mark P1 is located on the substrate) as claimed.

With respect to claim 6 and 7, 275 further discloses, the imaging means and the processing information about first position of the object together with information regarding the required position, (see col. 8, lines 10-35) as claimed.

With respect to claim 9, it is well known the lithography process is done while the mask is placed using a vacuum-generating surface. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to simply use the vacuum generating surface to hold the mask "object" as it is conventionally done in the art of lithography.

With respect to claim 10, 275 further discloses, the radiation source, (see col. 8, lines 10-15) as claimed.

Claim 11 is rejected for the same reasons as set forth in the rejection of claim 1, because claim 11 is claiming subject matter similar to claim 1.

With respect to claim 14, reference 275 and Shigeo fails to disclose the required position corresponds to a position of the object at which a clamping force that clamps the object on the first object table is substantially homogeneous, as claimed. But, it is a design choice to have the marks wherever it is necessary in order to come up with a best alignment. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to simply use the design choice as required by the experiments to come up with a best location of the marks from the best yield.

With respect to claim 15, Shigeo further teaches translating the object, the first table relatively to each other, (see figure 8c) as claimed.

Claims 16-20 are rejected for the same reasons as set forth in the rejection of claims 2, 6, 7, 14 and 15, because claims 16-20 are claiming similar subject matter as claims 2, 6, 7, 14 and 15.

Response to Arguments


Applicant's arguments filed 3/3/2006 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case reference 275 discloses object place on first position, measuring a displacement, translating the object and the table relative to one another and placing the object at the required position, (see col. 7, lines 24-40, the mask "object" is at the first position and the system AS1 aligns the mask by positioning the mask at the required position, see col. 7 line 64 through col. 8 line 5), as claimed. And, Shigeo teaches the displacement is measured with respect to the first object table, (see the constitution the rotation angles and the figure 8c) and removing the object from the first object table in order to placing it back on to the table, (see the constitution the reticle 12 is taken out "remove" and the stage is turned and place it back at the required position) as claimed. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references, as they are analogous because they are solving the similar problem of lithography. The object removing system of the Shigeo can be place in to the 275, in order to accurately align the reticle at a high speed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 571.272.7415. The examiner can normally be reached on 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571.272.7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vikkram Bali
Primary Examiner
Art Unit 2624

vb
May 9, 2006